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ABSTRACT

Imbedded aids are units of assistance and enrichment woven into textual material to aid in reading comprehension. Eighteen specific types of aids have been developed so far, ranging from line numbering locators to independent study suggestions. This paper presents an imbedded-aids prototype, a partial rationale for the approach, and a critique of two preliminary studies of the value of aids in improving reading comprehension and of their acceptability among teachers and students. Examples of imbedded aids are included. (AA)

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'Imbedded Aids' to Readers: Alternatives to Traditional Textual Material

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From all impressions the printed page is immutable. The evolution of printed matter has been so insignificant from its inception that students might just as well be reading material from the Gutenberg press. Several researchers have tried to find evidence supporting innovations in the printed page, but the impact of such research has been minimal.

The attempts at improvement reported here tend to differ in two ways from previous efforts: they are guided by the concerns and precepts of a still formulating theory of post-elementary reading, called the 'Languaging in the Content Areas', or LICA, thesis (Manzo and Sherk, submitted manuscript); and, as such, reflect aspects of the thesis which are addressed to "dialectical" thinking, language abilities, inquiry skills, values processing, aesthetics, and reading comprehension.

'Imbedded Aids' is the generic term applied to this class of alternatives to current textbook conventions. Imbedded Aids are units of assistance and enrichment which are woven into the fabric of textual material so as to be unobtrusive and yet present and available for reader use. The closest proximities one might picture for immediate reference would be an annotated version of the classics or a teacher's annotated edition of a textbook.

Presented here is an Imbedded Aids Prototype, a partial rationale for these, and a critique of two preliminary studies of the value of Aids in improving reading comprehension and their acceptability among teachers and students.

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Imbedded Aids

Eleven Aids are depicted with an accompanying statement of the purpose of each. The reader is requested to study figures 1, 2 & 3. Shown are the following Aids: (1) line numbering locators, (2) reading/study suggestions to the reader, (3) precis summary notes, (4) vocabulary assistance, (5) in process comprehension checks, (6) independent study suggestions, (7) indicators of high calibre writing, (8) a deletion-attention device, (9) "things to think about," (10) mini-enrichment notes, and (11) elaborated informational and study help enrichment notes. (This prototype is adapted from Man's Unfinished Journey, Chapter 24, "Patterns of Thought and Protest", Marvin Perry. Copyright © 1971 by Houghton Mifflin Company. Used by permission.)

Figures 1/2/3

Preliminary Studies: Critique

These fundamental questions initially have been researched concerning the Aids materials: how would reading comprehension compare for students reading Aids versus conventional textual material, and how would students and teachers receive textual material treated with Imbedded Aids?

Essentially two studies have been conducted, though in several locations. One study employed science material, the other social studies material. Subjects were 10th grade students in both cases.

The science Aids study was conducted first in an inner city school, and then again in two suburban schools. Approximately 200 students participated; half used Imbedded Aids material, the others a non-altered version of the

same chapter from a chemistry text. Students were given a 15 minute introduction to the Aids and told of the potential benefits that might be derived from effectively employing them.

It was apparent that several of the students did attempt to use the Aids. They required 7% longer, on the average, to complete the assigned chapter. Accordingly, comprehension scores on a 30 item short answer test reflected the additional effort. Experimental group students in all three schools scored 10-15% higher in reading comprehension. This difference was found to be statistically significant at the .01 level of confidence by a t-test between the means. The experimental and control groups were found to be of comparable pretreatment abilities based on a 50 item, cloze test.

A large scale replication of this study was conducted with social studies materials in 10 schools, in several different parts of the country. Over 500 students took part. A one-way analysis of covariance with cloze passage performance held constant revealed no statistically significant differences on a 50 item short answer test of reading comprehension. Students were reported to have taken the same amount of time to read the experimental and conventional materials.

When students and teachers were polled for their reactions to the experimental materials, approximately 90% of the students said that they had no difficulty understanding or using the Aids, and over 75% indicated that they would like to see similar Aids throughout the book. Students were also asked to grade each type of Aid in the experimental chapter. They gave very high marks to the précis summaries, vocabulary helpers, mini-notes, and Reader Helper notes. They gave low ratings to the cloze-like deletion and the To Research ideas.

Teachers attitudes paralleled those of students precisely on the individual Aids. In separate questions to the teachers they indicated that the experimental

version took about the same amount of time to cover as did the regular edition, and that the experimental version seemed to make their job easier. They were split on whether or not the students were more or less motivated to learn with the experimental materials. Sixty percent felt that their classes seemed to grasp the main idea more easily.

Conclusions

Some tentative conclusions seem supportable from these early studies.

The value of Aids for improving reading comprehension is variable, depending, it appears, on the appropriateness of the Aids chosen for a given selection, and the extent to which students have been schooled in their use.

Students do not appear to have great difficulty in adjusting to a more "busy" page. And, both students and teachers seem well disposed toward the extension of Aids into conventional textual materials.

Discussion

The problem of "content area reading" is essentially one of helping students with weak reading skills to read textual material, and helping students who have learned how to read effectively in one discipline to transfer their training to the varied demands of another. The IA's offer a solid base for improving both of these conditions. A running commentary is offered beside the basic text which explains the key concepts, key terminology and key questions around which the discipline is constructed. With such provisions, students should be able more easily to traverse the chasms between different fields of study. A history major should, for example, be able to read more ably in philosophy or medicine. More importantly, he could systematically reduce his dependency on the Aids, at his own pace, as he acquires greater knowledge and skills.

The Aids seem particularily worthwhile for several additional reasons which are currently under investigation.

For one, the Aids should help build motivation. Motivation is not a constant, but a variable condition; it rises and wanes. The typical book appears as a wall of print for many students, unwilling to forgive the student for previous failures and deficient skills. IA's, unlike most attempts to help readers, such as reading and study guides which can easily deteriorate into exercises and mental excursions away from the page, provide actual and immediate assistance: words are explained, facts critiqued, feedback on comprehension provided, and buttressing information offered. If the effect of such aid is to increase the amount of information learned per unit of effort, the student's willingness to attempt to learn should also increase.

Finally, and perhaps most importantly, a text containing Imbedded Aids is more informative and therefore, more provocative of thought and "languaging in the content areas". Languaging is viewed as the major methodology for improving dialectical and creative thinking, the central features of the LICA thesis.

Consistent too, with this thesis is the belief that additional research into the efficacy of the Aids is of equal importance to a need to SEARCH and develop more imaginative Aids, and other alternatives to print and communications traditions.

To date, eighteen Aids have been developed; many more seem just an imaginative leap away.

Figure 1.

Notes such as this one give directions for reading and studying the chapter more effectively.

Notes in the right-hand columns summarize the information in the text and are used to preview and review important ideas.

The lines of the main text are numbered to provide easy reference.

The notes in the right-hand columns should be read both before and after you read the main text.

Vocabulary: Terms likely to be unfamiliar are defined in the left-hand columns. The number in parentheses points out the text line where the term is first used.

(1) *Liberalism:* tolerance of the views of others and the willingness to challenge traditions and established institutions.

(6) *tyrannical:* cruel and unjust use of governmental power.

These □ symbols mark the beginning and ending of phrases or statements that are especially well written.

TO RESEARCH: Check in an encyclopedia or economics book for further information on Adam Smith's theories.

To Research are suggestions for independent research on related topics.

Liberal Responses to Industrialization

17th century liberalism in England stood for
(a) religious freedom;
(b) freedom of the press;
(c) natural rights of individuals;
(d) the right to resist oppressive government;
(e) confidence in human intelligence.

Liberalism emerged in England in the seventeenth century during the struggle between Parliament and kings. By the end of the eighteenth century British liberalism stood for religious toleration, parliamentary government and the rule of law, freedom of the press, natural right of the individual to life, liberty, and property, and the right to resist arbitrary and *tyrannical* government seeking to interfere with these natural rights. □British liberals had confidence in human intelligence, supported science, and attacked superstition.□ In the seventeenth and eighteenth centuries British liberals had been mainly concerned with protecting the rights of the individual against the dangers of oppressive government. But by the beginning of the nineteenth century a new set of problems had arisen in Britain. These problems focused around the plight of the working class and the impact of industrialization.

By the 19th century, liberal concerns turned to the plight of the working class.

(a) T or F: Liberalism first appeared in England in the 19th century. (page IV, line 1)
(b) Against what dangers were the liberals first concerned with protecting the rights of individuals? (page IV, lines 9-10)

British liberals advocate a laissez-faire policy. British liberals had come to support the doctrine of *laissez faire* (leh-sey *fair'*)—the notion that government should not interfere with business. They based their thinking largely on the writings of Adam Smith. In *The Wealth of Nations*, published in 1776, Smith stated the following: (1) Only when a man is free to operate his business in the way that brings him the most profit can a healthy economy be achieved. (2) By acting in his own self-interest—by trying to achieve a maximum of profit—the businessman benefits the entire community, for his actions lead to increased production, distribution, and consumption of goods. (3) The government harms business and the community when it interferes with the activities of businessmen. (4) The duty of government

British liberals supported a *laissez faire* form of government.

This idea was developed by Adam Smith in *The Wealth of Nations*, written in 1776.

Questions directly following the text check comprehension of what was just read. Questions are of two types: true/false and short answer. Answers are written on a separate piece of paper. The page number and text line supplied after each question provides a quick reference to check an answer.

Figure 2

Occasionally a word is missing from the text. The reader should be able to fill in the missing word with little trouble. Failure to do so may mean attention is drifting. The correct word can be found in the lower left-hand margin.

Was the liberal idea of laissez faire limited to business? See Reader Helper Note 78.

is to maintain peace and order within the community and not to meddle with the affairs of business.

The supporters of _____ insisted that proverty is natural. Since some are meant to be wealthy and some poor, government can do nothing about poverty. Any governmental reforms might hurt business and make things worse.

Reader Helper Notes -Provide valuable additional information and study help. These are printed in a companion book with "notes" numbered consecutively.

see Figure 3 for the actual Reader Helper Note.

Malthus blames poverty on overpopulation. Another English thinker who helped shape the liberal attitude in the early days of the Industrial Revolution was T. R. Malthus. In his *Essay on the Principle of Population* (1798), Malthus declared that the population always increases faster than the food supply. As a result mankind is always threatened with starvation. The real cause of poverty, according to Malthus, is overpopulation. Until the poor learn to keep down the size of their families, poverty will never be eliminated. Malthus concludes:

Another idea popular with British liberals came from T. R. Malthus in *Essay on the Principles of Population* (1798).

TO THINK ABOUT: What possible connections can you see between the growth of liberal thinking in Britain and the success of the American Revolution?

When the wages of labor are hardly sufficient to maintain two children, a man marries and has five or six. He of course finds himself miserably distressed. . . . He accuses the [greed] of the rich. . . . He accuses the [prejudiced] and unjust institutions of society. . . . The last person that he would think of accusing is himself.

Malthus said excessive population growth was the real cause of poverty, not greedy business practices.

MINI NOTE: Adam Smith and T. R. Malthus each had the ability to see things differently from others around them. This is called divergent thinking.

Malthus also argued that as the population increases, the supply of workers becomes greater than the demand. This leads to unemployment, low wages, and perpetual poverty. For Malthus, lowering the birth rate was the only effective way to combat poverty.

In effect Malthus was saying that, since the misery of the worker is his own doing, no laws passed by the state can eliminate poverty. Factory owners were delighted with Malthus' view. It soothed their consciences to be told that they were not responsible for the sufferings of workers.

Democratic liberals propose reform legislation. The problems of the working class persisted. Convinced that a laissez-faire policy was not acceptable, a growing number of liberals in England and elsewhere urged the government to introduce reforms to aid the working man. They wanted legislation that would improve conditions of work in the factory, allow the growth of labor unions, eliminate property requirements for voting, and increase educational opportunities for the poor. Whereas the older liberals

(3) laissez faire

To Think About are questions which have no one correct answer. They are intended to raise broad generalizations or to provide topics for discussion and debate.

Mini Notes provide enrichment information related to the text.

Figure 3
"Reader Helper Notes"
(A companion soft cover, reference
book to the basic textbook)

#78 Was the liberal idea of laissez faire (non-interference) limited to business?

No, the early liberals didn't want interference of any kind from the government, not even in the form of government assistance to the poor. They feared that any interference would lead to interference in business and trade. Adam Smith in Wealth of Nations expressed their views best. He held that all but a helpless few would prosper when men could compete in a free market. T. R. Malthus, further argued, that those few who would remain poor had only themselves to blame because they had too many children. This philosophy became known as "economic liberalism". Today it would be called conservativism.

In due course a new form of liberalism began to develop, which you can more easily understand if you will think of it as "democratic liberalism". Democratic liberals came to believe that the government had to depart from a laissez faire (non-interference) policy inorder to help the poor and ease human suffering.

Reading/Study Suggestion - Go back now to page 526 and read about Malthus (the "economic liberal") and about the rise of the new (democratic) liberalism. After you have read 526 and 527, consider this point: there is a parallel in the differences between the "economic" and "democratic" liberals of 18 Century England and the Republican and Democratic parties of the United States.

You have undoubtly wondered whether you have understood the differences between the major parties in our country. Stop and think about what similarities and differences there might be between the two.

To clarify your thinking, ask your teacher, and/or classmates for their opinions of how these political philosophies compare. Ask your teacher to point-out specifically what is meant by the notions liberal and conservative "wings" of political parties.